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ABSTRACT

The invention relates to a reception arrangement for receiving multicarrier symbols, each multicarrier symbol (S_1 , S_2 , S_3) comprising a plurality of single carrier symbols, each symbol modulating a respective carrier frequency (f_1 , f_2 , f_3). The single carrier symbols are transmitted simultaneously. The arrangement comprises means for detecting phase error of each single carrier and means for correcting the phase of a sampling clock (52) in view of the estimated error.

The means for estimating phase error comprise means (58₁ ... 58_N, 24, 40) for determining a parameter êi for a carrier fi according to the following formula:

$$\hat{\mathbf{e}}_{1} = \mathbf{E} \left[\mathbf{r}_{k-1}^{1} \mathbf{a}_{k}^{i*} - \mathbf{r}_{k}^{1} \mathbf{a}_{k-1}^{i*} \right] \tag{3}$$

wherein r_k^i is the detected signal for the single carrier at a time t, a_k^i is the corresponding symbol at the same time t, a_{k-1}^i and r_{k-1}^i correspond, respectively, to a_k^i and r_k^i at time t-NT, NT being the duration of transmission of a multicarrier symbol, and E[] means an average value on several successive symbols.